

Remarks

Claims 1-10 were pending in the subject application. By this Amendment, the applicants have amended claims 1, 2 and 5-10 and added new claim 11.

Support for the claim amendments can be found in the specification as originally filed. Support for the amendment to claim 6 can be found at, for example, Tables 1, 3 and 5 of the as-filed application; support for the amendment to claim 7 can be found at, for example, page 7, lines 6-11 of the as-filed application; support for the amendment to claim 11 can be found at, for example, page 7, lines 11-12 of the as-filed application. No new matter has been added by these amendments.

Entry and consideration of the amendments presented herein is respectfully requested. Accordingly, claims 1-11 are currently before the Examiner. Favorable consideration of the pending claims is respectfully requested.

The amendments set forth herein have been made in an effort to lend greater clarity to the claimed subject matter and to expedite prosecution. These amendments should not be taken to indicate the applicants' agreement with, or acquiescence to, the rejections of record. Favorable consideration of the claims now presented, in view of the remarks and amendments set forth herein, is earnestly solicited.

Initially, claim 5 has been objected to due to informalities. Specifically, the use of the term "or" in line 2 has been objected to. By this Amendment, the applicants have amended claim 5 to delete reference to "oil or."

Claims 6, 7, 9, and 10 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. By this Amendment, claim 6 has been amended to specify the ingredients in Tables 1, 3 and 5. Claim 7 has been amended to clarify the steps of producing the antibacterial composition. Claims 9-10 have been amended to lend greater clarity to the claimed subject matter. In view of these amendments, the metes and bounds of the claims can be readily ascertained. Accordingly, the applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §112, second paragraph.

Claims 1-10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Zvekova *et al.* The applicants respectfully traverse this ground for rejection because the Zvekova *et al.* reference does not teach or suggest the currently-claimed antibacterial composition.

While it may generally be obvious for a skilled artisan to determine an optimum value within an already disclosed range, one exception to this rule is when the parameter that is optimized was not recognized to be a result-effective variable. *see In re Antonie*, 559 F.2d 618, 620 (C.C.P.A. 1977).

The Zvekova *et al.* reference does not teach or suggest the currently-claimed antibacterial composition, which has a pH of 4.6 or less. Further, there is no evidence that pH is recognized as a result-effective variable for achieving antibacterial effects. Therefore, one finds no reason to optimize pH values in the Zvekova *et al.* composition to arrive at the currently-claimed composition.

Furthermore, a *prima facie* case of obviousness may be rebutted by evidence that the claimed invention yields unexpectedly improved results over the prior art. *See In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1988), *In re Sebek*, 465 F.2d 904, 907 (C.C.P.A. 1972). The fact that the elements work together in an unexpected and fruitful manner supports the conclusion that the applicant's invention was not obvious to those skilled in the art. *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007), *U.S. v. Adams*, 383 U.S. 39 (1966).

The unexpectedly superior antibacterial activity of the currently-claimed composition at a pH of 4.6 or less (see Figures 1-6), is nowhere taught or suggested by Zvekova *et al.* The currently-claimed composition at a pH of 4.6 or lower achieves a far greater suppressive effect on Gram-negative bacteria (such as *E. coli* and *Pseudomonas aeruginosa*) as well as Gram-positive bacteria (such as *Staphylococcus aureus*, MRSA, and *Streptococcus mutans*), as compared to a neutral liquid diet as well as the fermented milk preparation as described in Zvekova *et al.* (Figures 1-2).

The mere fact that the purported prior art could have been modified or applied in some manner to yield an applicant's invention does not make the modification or application obvious unless "there was an apparent reason to combine the known elements in the fashion claimed" by the applicant. *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). An applicant's invention is not "proved obvious merely by demonstrating that each of its elements was, independently, known in the (purported) prior art." *Id.*

Here, there is no reason to modify the Zvekova *et al.* disclosure to arrive at the currently-claimed antibacterial composition having a pH of 4.6 or less; therefore, a *prima facie* case of obviousness has not been established. In addition, the unexpectedly superior antibacterial activity provides further evidence that the currently-claimed composition is not obvious. Accordingly, the applicants respectfully request reconsideration and withdrawal of this rejection under 35 U.S.C. §103(a).

In view of the foregoing remarks and the amendments to the claims, the applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 or 1.17 as required by this paper to Deposit Account No. 19-0065.

The applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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